



Fluorescent Lamps

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For government purchasers

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Responsible Purchasing Attributes

- ✓ Air quality
- ✓ Climate change
- ✓ Energy efficiency
- ✓ Recycled content
- ✓ Reduce solid waste
- ✓ Reduce use of toxic chemicals

Benefits of Purchasing

- ✓ Lower energy bills.
- ✓ Lower release of mercury.
- ✓ Less maintenance.

How to Buy

Washington State Contract #[00802](#) offers high-efficiency T8 lamps.

Lamps from the F032 ECO Series are the most environmentally preferable lamps.

Goal: To reduce energy use and mercury content by installing energy efficient fluorescent lamps.

High efficiency tube lamps have improved over the past few years. T8 and T5 fluorescent lamps have a longer rated life and emit a higher quality of light than T12 and standard-grade T8 lamps.

Some of these long lasting lamps are rated to last 36,000 hours. Since lighting accounts for at least 30 percent of the energy used in most commercial buildings, total savings can be large.

Replacing T12s with T8s (with electronic ballasts) typically results in a 40 percent savings in energy costs. See *How to Buy* for information on buying T8s.

The Department of Enterprise Services is directed to give priority and preference to the purchase of low-mercury products in [Chapter 70.95M RCW Mercury Education Reduction Act 2003](#). All fluorescent lamps contain mercury, a heavy metal that is toxic even in extremely low doses.

The [U.S. Green Building Council](#) encourages the use of low-mercury lamps in its Leadership in Energy and Environmental Design (LEED) rating system. LEED credits are awarded if the average mercury content for all indoor and outdoor fixtures in the building is below a certain level.

Standards

Lamps are identified as hazardous or non-hazardous by the U.S. Environmental Protection Agency's (EPA) test for Toxicity Characteristic Leaching Potential (TCLP). Most lamps identified as non-hazardous contain lower amounts of mercury. Check the manufacturer's website to find lamps that are TCLP compliant.



Leading the Way – Washington State Department of Corrections

The Washington State Department of Corrections (DOC) has reduced energy costs through relamping projects at several facilities. DOC has replaced T12s with T8 and T5 lamps.

The Stafford Creek Corrections Center anticipates annual energy savings of at least \$11,000 by retrofitting 12,000 lamps in its facility.

Group relamping is recommended when a large number of lamps need replacement. Entire rooms, floors, or even buildings can be retrofitted.

Many relamping projects are accomplished with utility rebates. See the DSIRE website dsire-usa.org to learn about utility rebate programs.

To view an electronic copy of this document and others, go to <http://www.ecy.wa.gov/programs/swfa/epp/>.

Environmentally Preferable Purchasing

The Department of Ecology offers tools and resources to make environmentally preferable purchasing easier. Find out about environmentally preferable products, standards and certifications, law and directives, and more at our website:

<http://www.ecy.wa.gov/programs/swfa/epp/>

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Resources

[Association of Lighting and Mercury Recyclers](#)

[Consortium for Energy Efficiency T8 Replacement Lamps](#)

[Interstate Mercury Education and Reduction Clearinghouse](#)

[Product Stewardship Institute Fluorescent Lighting](#)

[Energy-Efficient Product Purchasing](#) U.S. Department of Energy

[Mercury-containing Lamps/Light Bulbs](#) Department of Ecology

[National Lighting Product Information](#)

Product Performance

Lamps must be matched to the right fixture and ballast to ensure that they will perform properly and last a long time.

The Rocky Mountain Institute ran a life cycle analysis, which found that fluorescent lamps tend to burn out more quickly when frequently turned on and off. To extend the life of the bulb, leave them on when leaving the room for less than 15 minutes.

End of Life

Improper disposal of lamps causes 400 to 500 pounds of mercury to be released into the state's environment each year, according to the state Mercury CAP (Chemical Action Plan). Washington law requires all mercury-containing lamps to be recycled. It is illegal to throw mercury containing lights in the trash. Recycling these lights safely keeps mercury out of the environment.

Facilities have the choice of managing spent lamps as universal waste (UW) or dangerous waste (DW). The Universal Waste Rule for Lamps is less burdensome.

State contract [00615](#) offers recycling and disposal services for used lamps that comply with the Universal Waste rules. State and local governments can have the vendor pick up the spent lamps or request a recycling kit to send them directly to the manufacturer.

Washington law establishes a producer-financed product stewardship program for mercury-containing lights. This program provides Washington State residents options to recycle fluorescent tubes, compact fluorescent lights (CFLs) and high intensity discharge (HID) lights, at no charge, by dropping them off at authorized collection sites around Washington State. See [Ecology's Mercury Lights Product Stewardship](#) for program information.



Laws and Directives

Executive Order 02-03 Sustainable Practices by State Agencies	Directs agencies to shift to nontoxic, recycled, and remanufactured materials in purchasing and construction. Also directs agencies to reduce or eliminate waste as an inefficient or improper use of resources and help create markets for recycled content products.
Executive Order 05-01 Establishing Sustainability and Efficiency Goals for State Operations	Directs state agencies to reduce their energy purchases by ten percent using all practicable and cost-effective means including energy efficiency programs.
Chapter 70.95M RCW Mercury Education Reduction Act 2003	The Department of General Administration shall give priority and preference to the purchase of equipment, supplies, and other products that contain no mercury-added compounds or components, with certain designated exceptions. Fluorescent lamps containing mercury must be labeled as containing mercury to be sold in Washington State.
RCW 70.275.080	Requires all persons, residents, government, commercial, industrial, and retail facilities and office buildings to recycle their end-of-life mercury-containing lights. Forbids mercury-containing lights to be placed in waste containers for disposal at incinerators, waste to energy facilities, or landfills.

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